

Date: Monday, 6/5/2006 11:01:21 AM  
 User: Kim Johnston

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BEARING ASSEMBLY		
Job Number	: 27413		Part Number	: D3121241		
Estimate Number	: 10716		Drawing Number	: D3121 REV C2		
P.O. Number	: N/A		Project Number	: N/A		
This Issue	: 6/5/2006 S.O. No. : N/A		Drawing Revision	: C2		
Prsht Rev.	: NC		Material	: N/A		
First Issue	: N/A		Due Date	: 6/30/2006 Qty: 30 Um: Each		
Previous Run	: 27315					
Written By	: <u>Seq</u> <u>Comment Below</u>					
Checked & Approved By	: <u>DS</u> 06-06-05					
Comment	: Est Rev:A 04.02.18 New issue KJ/DS					

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	MDELRINR12500	DELRIN ROUND BAR 1.25"
		 
<b>Comment:</b> Qty.: 0.0546 f(s)/Unit Total : 1.6380 f(s) <b>Material:</b> Ø1.25 Delrin Rod (M-DELIN-R1.2500) Identify as D3121-25 <b>Batch:</b> <u>M601078</u> <span style="margin-left: 100px;">J.G 06/06/05</span>		
2.0	HARDINGE	HARDINGE CNC LATHE SMALL
		 
<b>Comment:</b> HARDINGE CNC LATHE SMALL  1-Turn D3121-25 Cap as per Folio FA387  2-Deburr <span style="margin-left: 100px;">Er 06/06/06 x 31</span>		
3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
		 
<b>Comment:</b> INSPECT PARTS AS THEY COME OFF MACHINE <span style="margin-left: 100px;">Er 06/06/06 x 31</span>		
4.0	QC8	SECOND CHECK
		 
<b>Comment:</b> SECOND CHECK <span style="margin-left: 100px;">MS 06/06/06, 31</span>		
5.0	D312123	Bearing
		 
<b>Comment:</b> Qty.: 1.0000 Each(s)/Unit Total : 30.0000 Each(s) <b>Pick:</b> Qty Part Number Description Batch 1 D3121-23 Bearing <u>B26936</u> <span style="margin-left: 100px;">Er 06/06/06 x 31</span>		

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE			By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)								
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector		
			Initial Design Mgr	Action Description Design Mgr	Sign & Date					

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes  No  DQA:  Date: 06/06/07

NOTE: Date & initial all entries

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Date: Monday, 6/5/2006 11:01:22 AM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BEARING ASSEMBLY

Job Number: 27413

Part Number: D3121241

Job Number:



Seq. #: Machine Or Operation:

Description :

6.0 SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Press D3121-23 Bearing into D3121-25 Cap as per Dwg D3121

En o 06/06 x 31

7.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

9in 06/06/06 31

8.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: ST409

SL 06/06/06 31

9.0 DC

DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Inspection Level 21

06/06/07 31

Job Completion



U 06/06/07

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Design Mgr	Approval QC Inspector
			Initial Design Mgr	Action Description Design Mgr	Sign & Date			

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

NOTE: Date & initial all entries QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b>	<u>27413</u>
<b>Description:</b> Cap	<b>Part Number:</b>	<u>D3121-25</u>
<b>Inspection Dwg:</b> D3121 <b>Rev:</b> C2		<b>Page 1 of 1</b>

## FIRST ARTICLE INSPECTION CHECKLIST

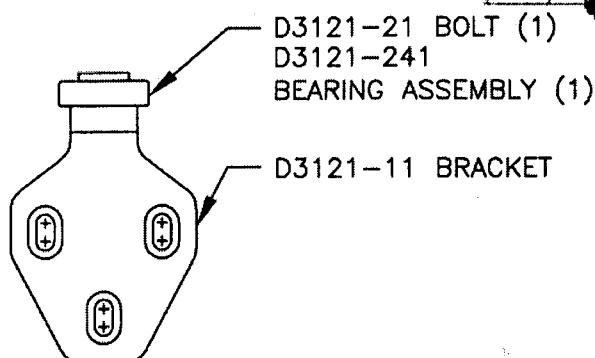
## X First Article      Prototype

Measured by:	Er	Audited by:	Jm	Prototype Approval:	N/A
Date:	5/6/06/06	Date:	06/06/06	Date:	N/A

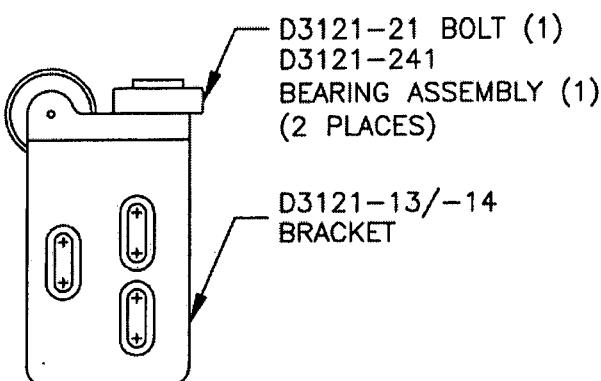
Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue (P/O D3121-241)	KJ/RF	TT

**DART**

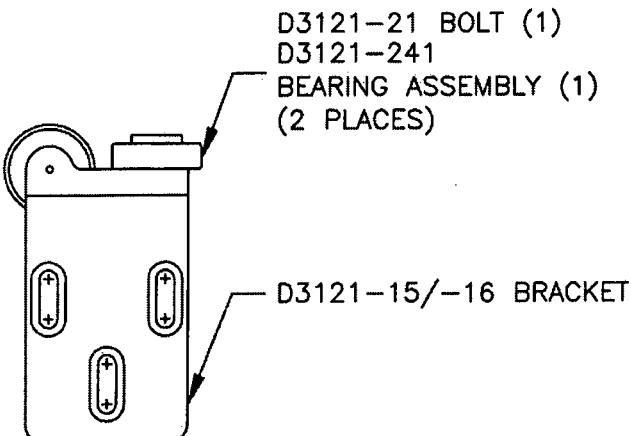
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CHECKED	APPROVED	DRAWING NO.	REV. C
		D3121	SHEET 1 OF 10
DATE		TITLE	SCALE
04.02.17		BRACKET ASSEMBLY	1:2

**RELEASED**  
04.03.01

**D3121-041 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-33)



**D3121-043 (SHOWN) / D3121-044 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-37/-38)



**D3121-045 (SHOWN) / D3121-046 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-35/-36)

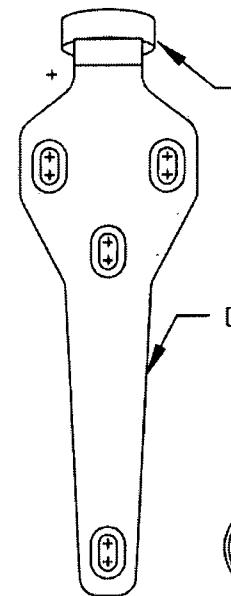
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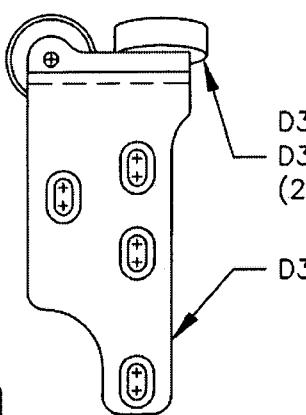
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		D3121	SHEET 2 OF 10
DATE		TITLE	SCALE
04.02.17		BRACKET ASSEMBLY	1:2



D3121-21 BOLT (1)  
D3121-241  
BEARING ASSEMBLY (1)

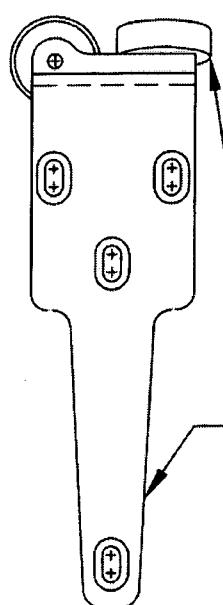
**D3121-141 BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23001-01)



D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

D3121-113/-114 BRACKET

**D3121-143 (SHOWN) / D3121-144 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-03/-04)



D3121-21 BOLT (1)  
D3121-241 BEARING ASSEMBLY (1)  
(2 PLACES)

**D3121-145 (SHOWN) / D3121-146 (OPPOSITE)**  
**BRACKET ASSEMBLY**  
(REPLACES PREMIER P/N B30-23000-05/-06)

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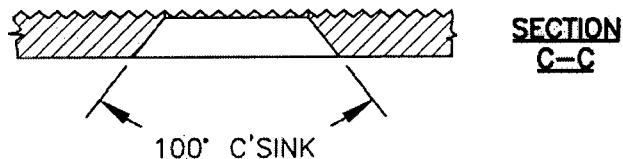
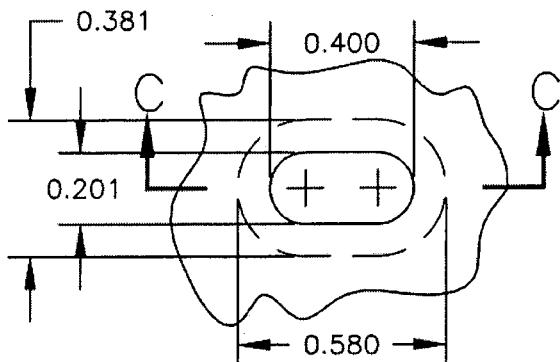
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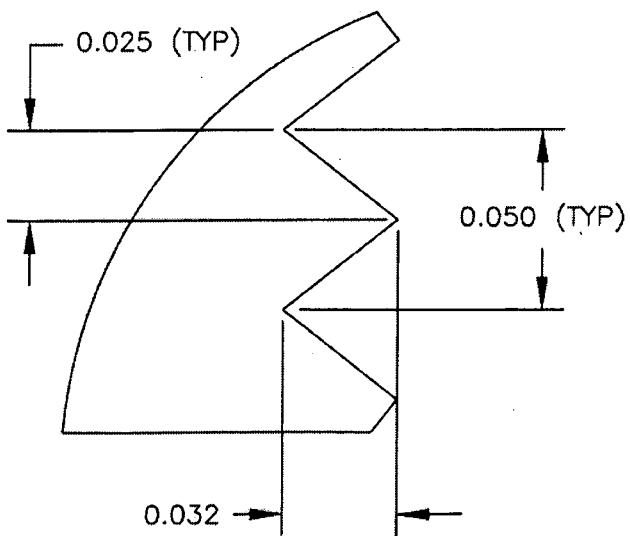
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		D3121	SHEET 3 OF 10
DATE		TITLE	SCALE
04.02.17		BRACKET ASSEMBLY	1:1

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**DETAIL A:**  
**SLOT DETAIL**  
SCALE 2:1  
VIEW ROTATED



**DETAIL B:**  
**RIDGE DETAIL**  
PARTIAL SECTION  
SCALE 1:20



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04.02.17		D3121	SHEET 4 OF 10

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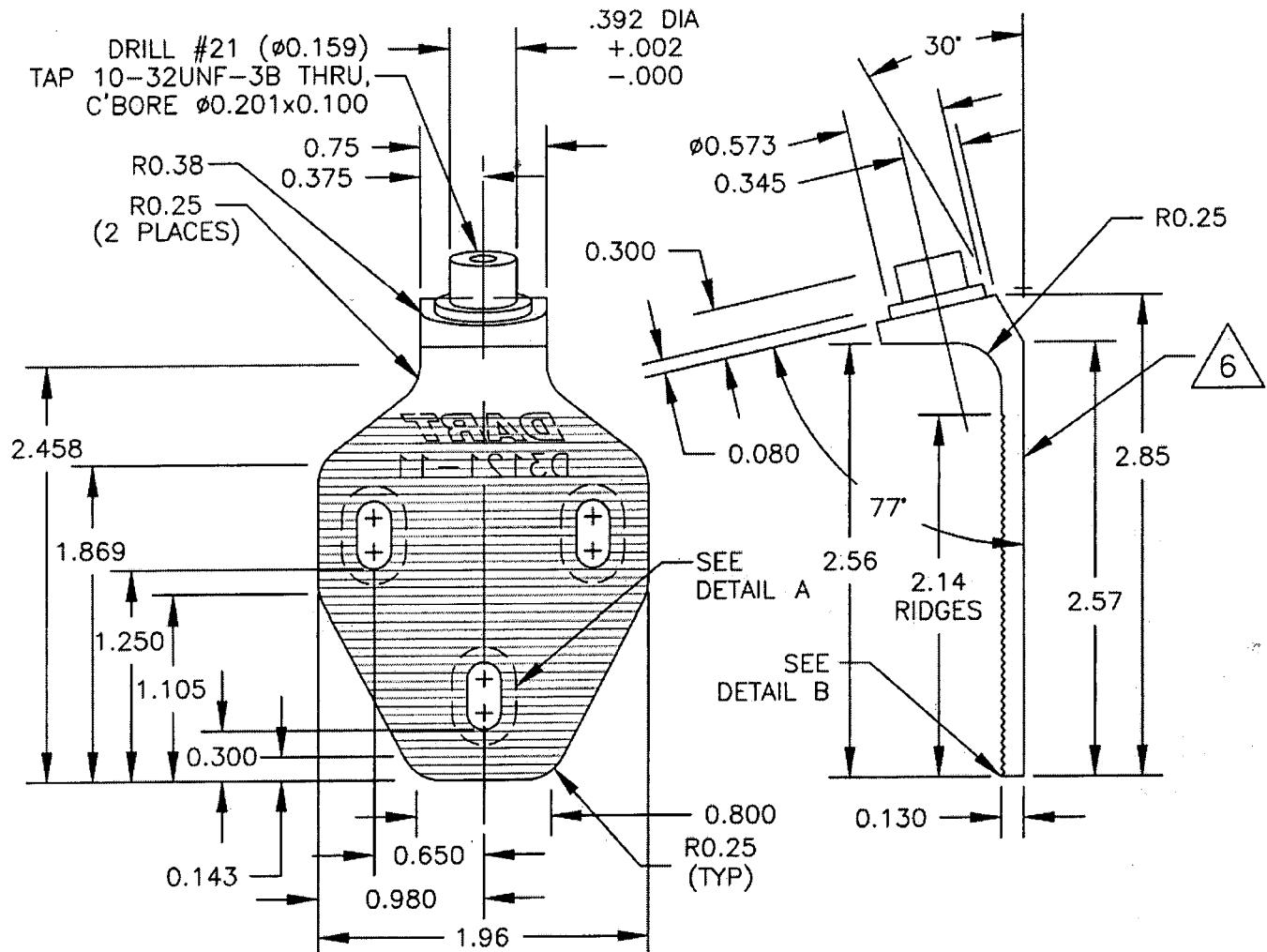
HAWKESBURY, ONTARIO, CANADA

REV. C

SHEET 4 OF 10

SCALE

1:1

**D3121-11 BRACKET**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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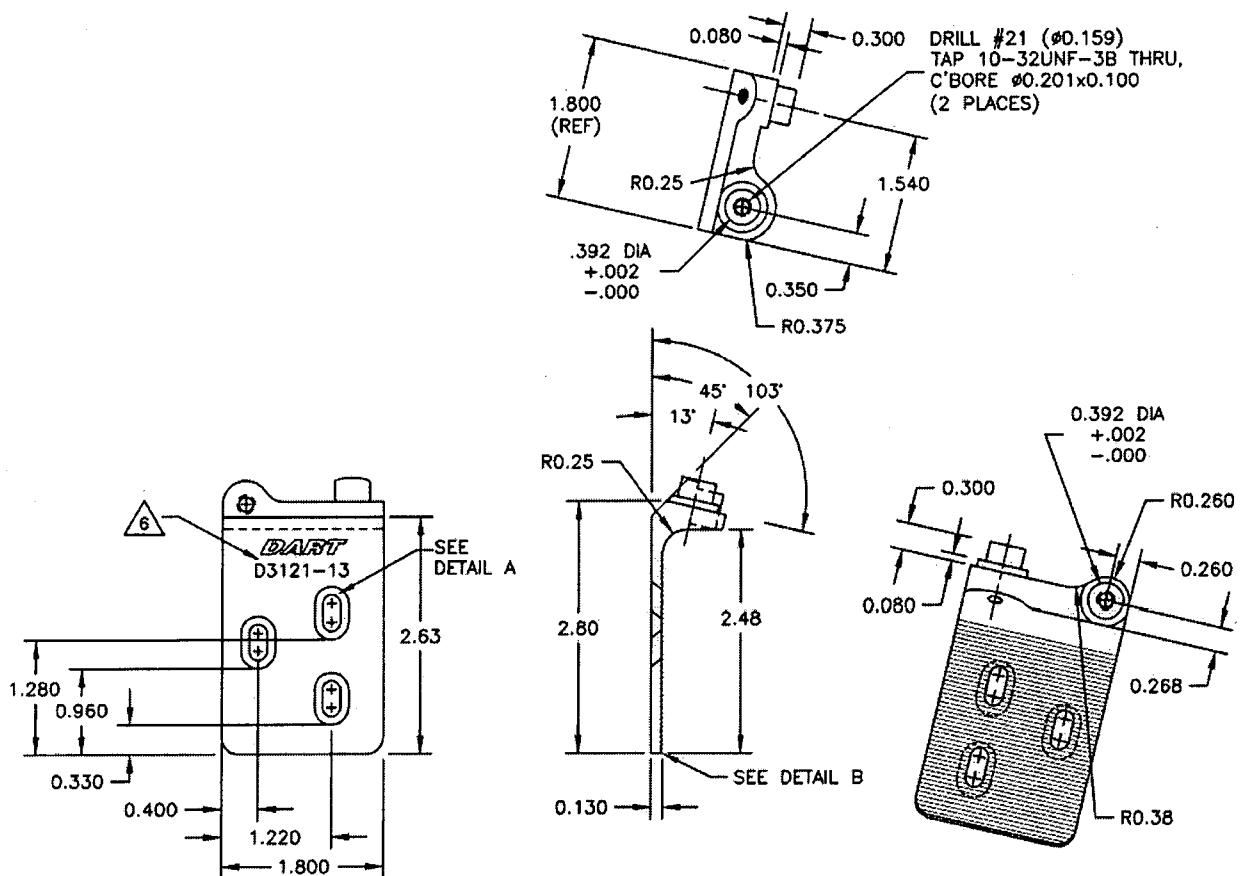
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DATE 04.02.18	TITLE BRACKET ASSEMBLY		SCALE 1:2



**D3121-13 BRACKET (SHOWN)**

**D3121-14 BRACKET (OPPOSITE)**

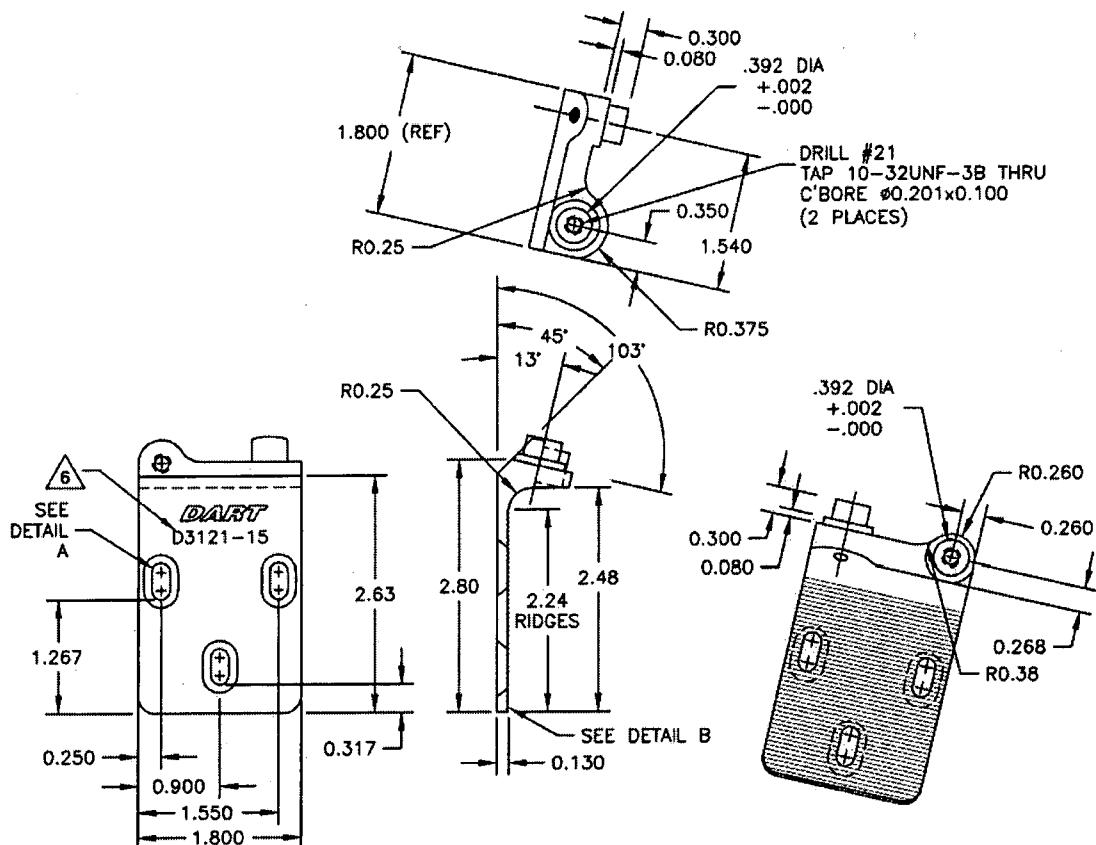
- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE STRENGTH = 150 ksi  
MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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		D3121	SHEET 6 OF 10

DATE  
04.02.18TITLE  
BRACKET ASSEMBLYSCALE  
1:2**D3121-15 BRACKET (SHOWN)****D3121-16 BRACKET (OPPOSITE)**

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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REV. C

SHEET 7 OF 10

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## SCALE

DATE

| D3121

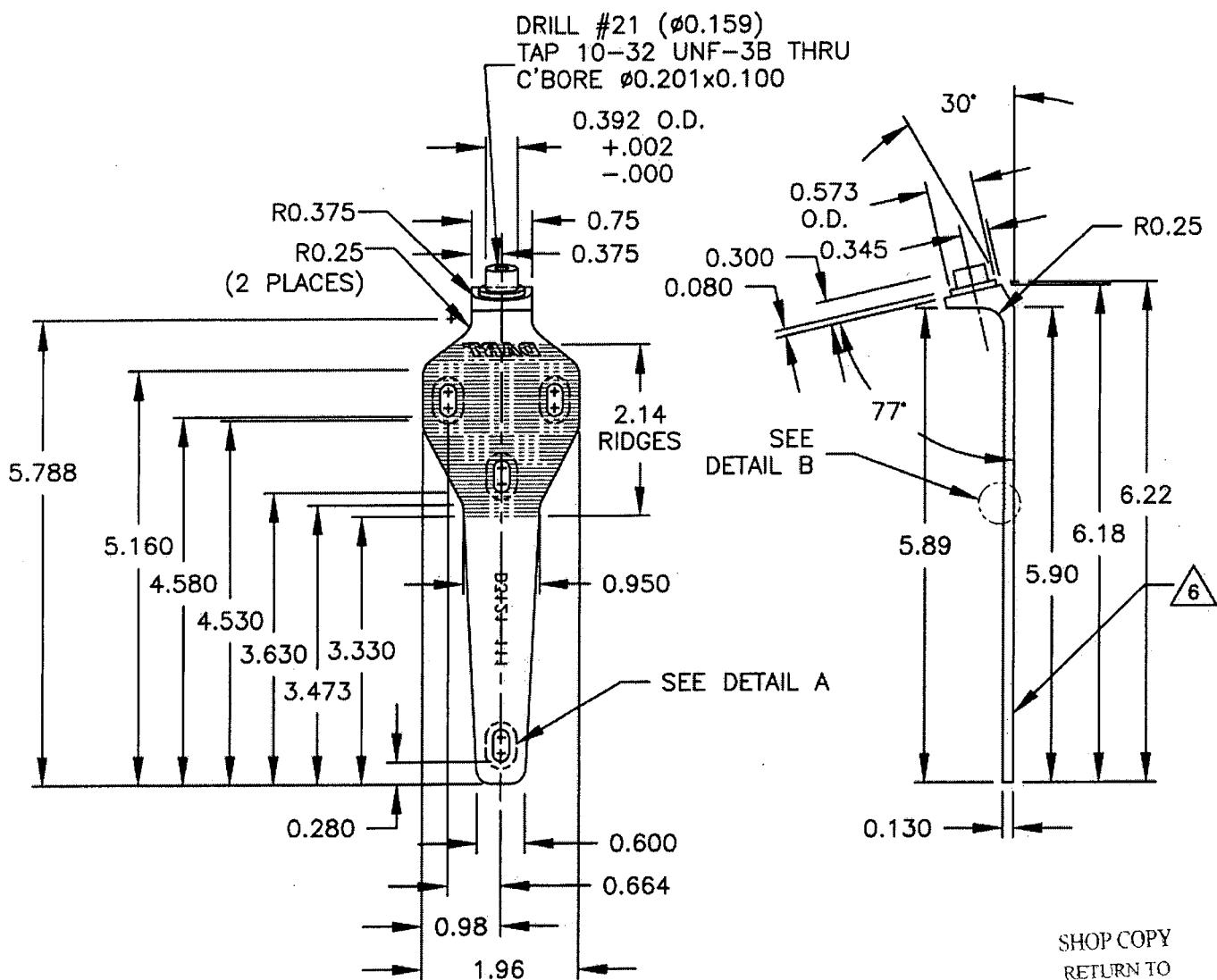
SHEET 7 OF 10

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SCALE

**SCALE**

**TITLE**



**D3121-111 BRACKET**

- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)  
MIN ULTIMATE TENSILE = 150 ksi  
MIN YIELD TENSILE = 100 ksi
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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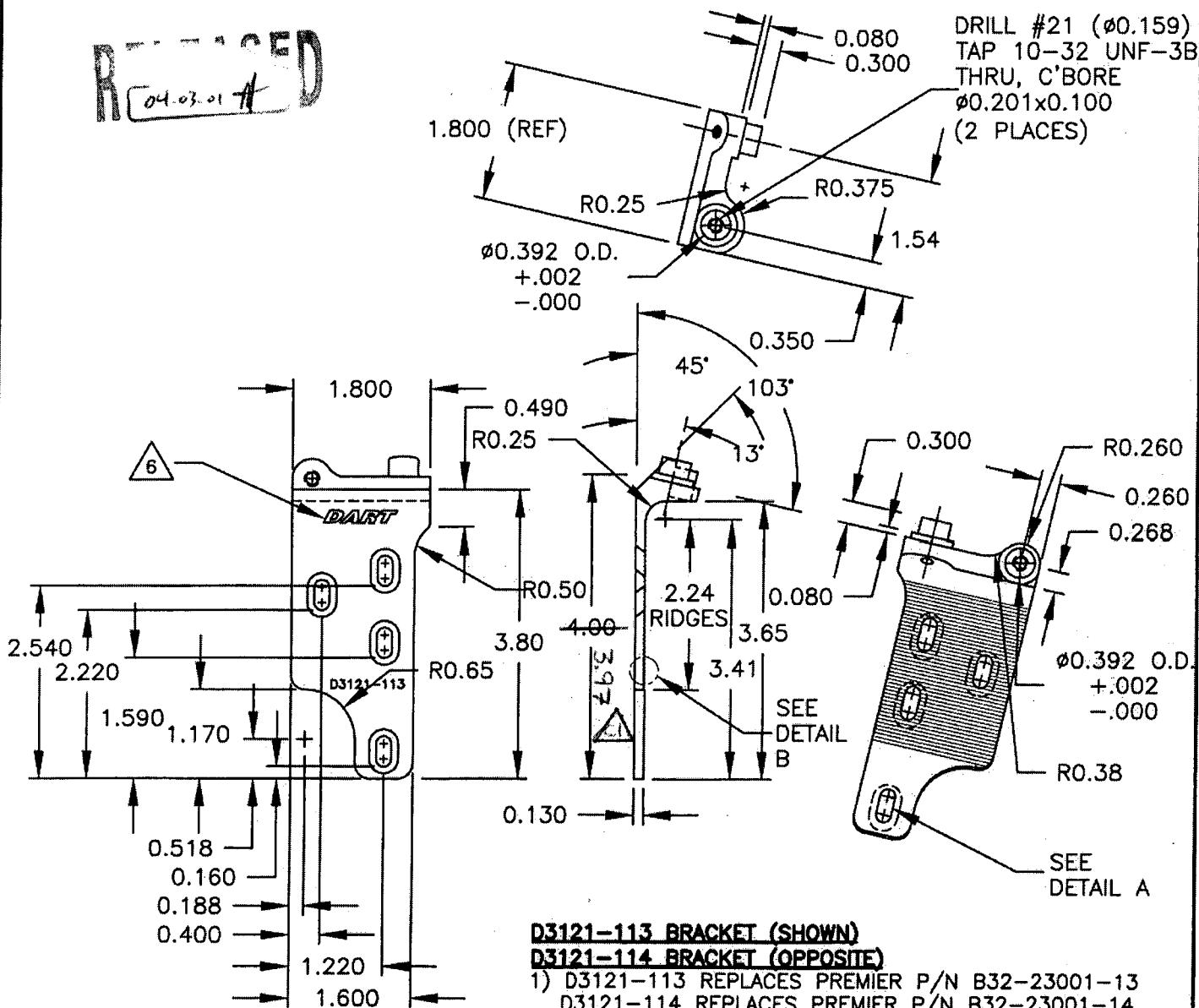
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DATE 04.02.18	TITLE BRACKET ASSEMBLY		SCALE 1:2	

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**D3121-113 BRACKET (SHOWN)**

**D3121-114 BRACKET (OPPOSITE)**

1) D3121-113 REPLACES PREMIER P/N B32-23001-13  
D3121-114 REPLACES PREMIER P/N B32-23001-14

2) MATERIAL: 17-4 SS PER AMS 5604/5643 SHOP COPY

(REF DART SPEC. M17-4-B)

MIN ULTIMATE TENSILE STRENGTH = 150 ~~ksi~~ RETURN TO  
ENGINEERING

MIN YIELD TENSILE STRENGTH = 100 ~~ksi~~ CONTROLLED COPY

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED SUBJECT TO AMENDMENT

4) ALL DIMENSIONS ARE IN INCHES WITHOUT NOTICE

5) BREAK ALL SHARP EDGES 0.005 TO 0.015 WORK ORDER

6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN 27413

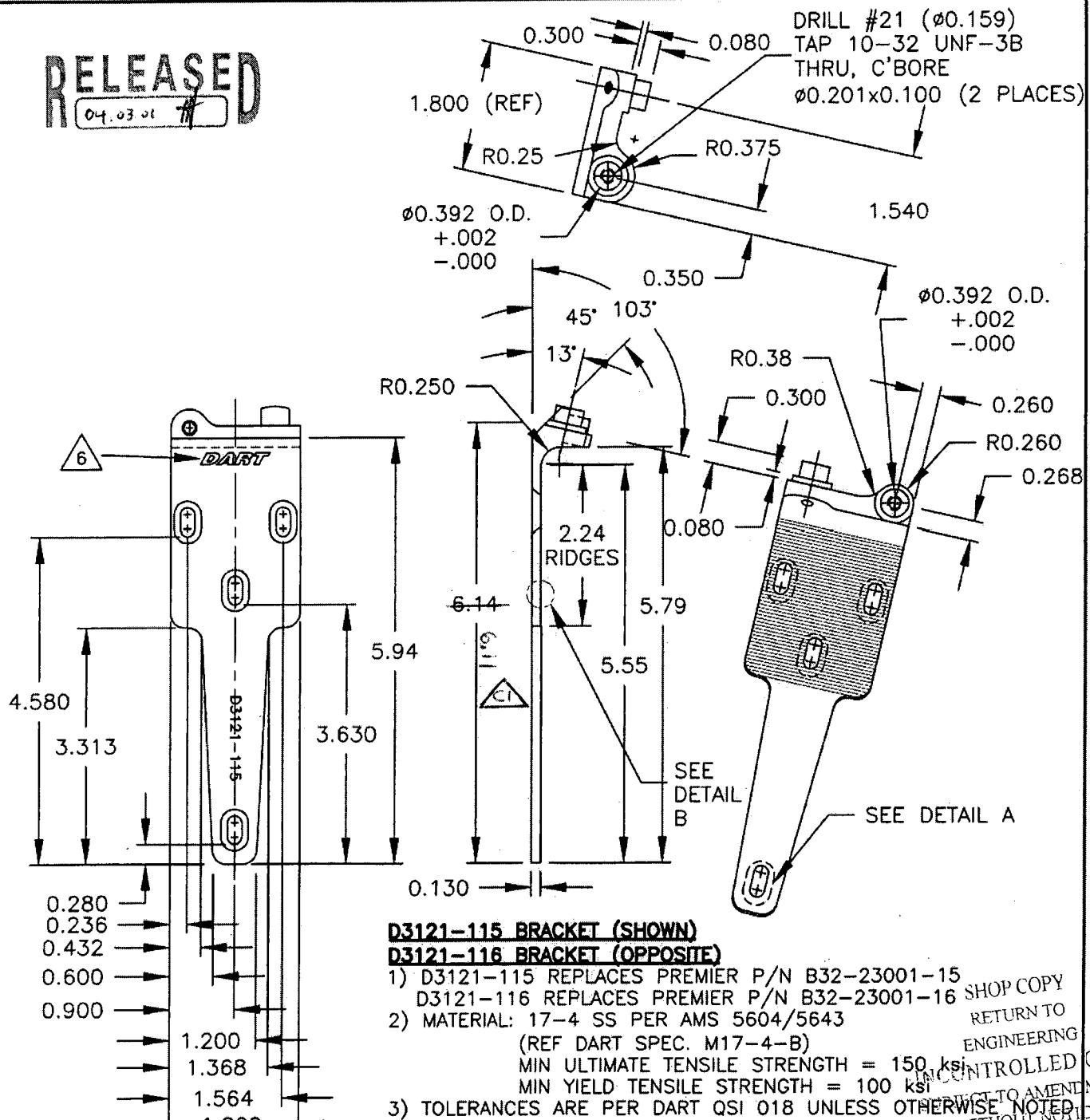
7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005



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DATE 04.02.18	TITLE BRACKET ASSEMBLY		SCALE 1:2	

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04.03.01 

04.03.01



**D3121-115 BRACKET (SHOWN)**

D3121-116 BRACKET (OPPOSITE)

1) D3121-115 REPLACES PREMIER P/N B32-23001-15  
 D3121-116 REPLACES PREMIER P/N B32-23001-16 SHOP COPY

2) MATERIAL: 17-4 SS PER AMS 5604/5643 RETURN TO  
 (REF DART SPEC. M17-4-B) ENGINEERING

MIN ULTIMATE TENSILE STRENGTH = 150 ksi CONTROLLED COPY

MIN YIELD TENSILE STRENGTH = 100 ksi NOT TO AMENDMENT

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED WITHOUT NOTICE

4) ALL DIMENSIONS ARE IN INCHES WORK ORDER

5) BREAK ALL SHARP EDGES 0.005 TO 0.015

6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN

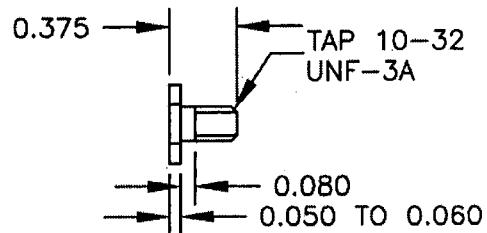
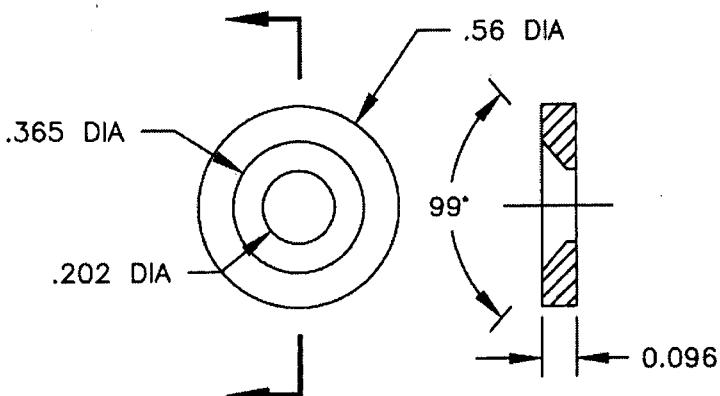
7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005 NO. 27413

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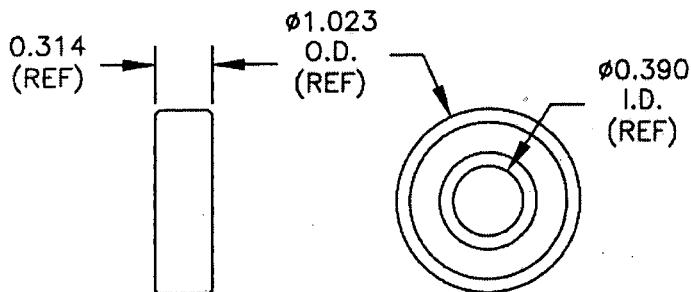
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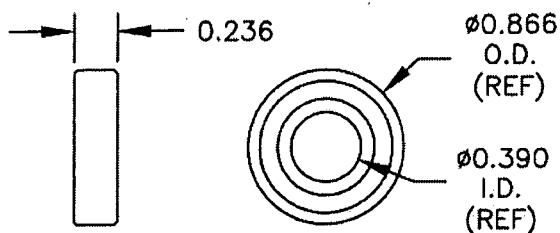
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		D3121	SHEET 10 OF 10

DATE  
04.02.17TITLE  
BRACKET ASSEMBLYSCALE  
1:1**D3121-17 WASHER (SCALE 2:1)**

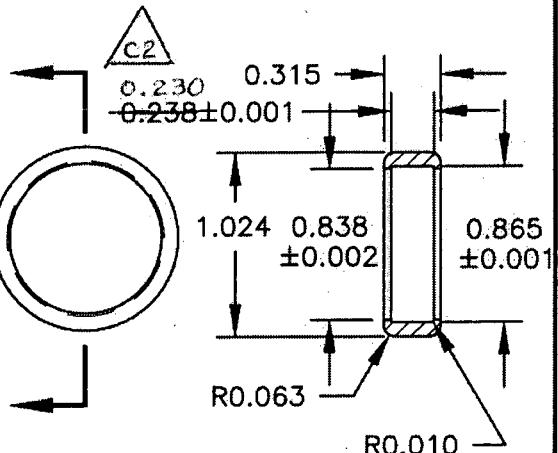
- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015

**D3121-19 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM  
FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-23 BEARING (SCALE 1:1)**

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z  
OR KML P/N 6900-2Z
- 2) ALL DIMENSIONS ARE IN INCHES

**D3121-25 CAP (SCALE 1:1)**

- 1) MATERIAL: DELRIN ROD, Ø1.25 (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

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D3121-25  
SUBJECT TO AMENDMENT  
CAP  
WITHOUT NOTICE  
WORK ORDER  
NO. 27413  
BEARING

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**D3121-241 BEARING ASSEMBLY (SCALE 1:1)**